

City of Biggs

MEMORANDUM

TO: Honorable Mayor and City Council Members

FROM: David Swartz, PE, PLS – City Engineer

DATE: June 20, 2011 City Council Meeting, Prepared June 9-13, 2011

SUBJECT: Compliance Schedule, Zero Discharge Report Update, Groundwater Monitoring Plan, WWTP Facilities Plan Update

Requested Action:

- 1.) Approve staff to provide an application for compliance schedule as outlined by Regional Board Resolution 2008-0025 based on converting the City of Biggs treatment plant to a zero discharge facility and thereby eliminating the need for future NPDES permits.
- 2.) Approve staff to perform the work associated with the amended WWTP facilities upgrade engineering report and analysis which includes updating the 2000 water balance report, submitting a monitoring well plan to the Regional Board, installing and monitoring ground water wells per the approved plan, working with the City administrator to option the necessary land area, respond to the Regional Board on City violations, providing the necessary CEQA and NEPA findings, revising the USDA application, providing the eventual design and construction documents for the treatment plant conversion.

Recommendation:

- 1.) Submit a compliance schedule by July 30th to the Regional Board.
- 2.) Approve staff to provide the above mentioned work in specific phases, beginning with updating the WWTP facilities plan and zero discharge report and monitoring well plan.

Financial Impact:

- 1.) Cost associated with Item No 1 above is \$7,913.25 and itemized on the attached exhibit No. 1.
- 2.) Cost associated with Item No. 2 above is \$ 25,484.17 and itemized on the attached exhibit No. 2.

Background:

Historical Review:

The City has been actively participating in discussions with the Regional Water Quality Control Board regarding the designation of our waste effluent discharge classification referred to by the

Board as MUN. We have been part of a joint effort at the urging of our Regional Board Representative along with the Cities of Live Oak, Willows, and Colusa.

The cities final effluent is discharged to an agricultural drain titled Lateral K, then flows into Hamilton Slough, which in turn flows into the Cherokee Canal south through the Sutter By Pass into Butte Creek and eventually is either dissipated into the Butte Sink, removed via irrigation for agricultural purposes, or in some fashion may be pumped into the Sacramento River.

You may remember from prior discussions that an MUN designation of our discharge implies that the down stream uses of the receiving waters are used for direct human contact and consumption such as domestic water supplies and/or active recreation and water sports. Previous interpretations by board staff did not consider Lateral K and Hamilton Slough with this MUN designation as outlined in the Basin Plan, however more recent events stimulated by the City of Vacaville permit, have modified how the board staff is interpreting the basin plan thus placing the cities discharge waterways under this designation.

What this means for the City of Biggs is that our treatment level requirements both current and future do not meet the criteria for treated effluent discharged into a waterway with an MUN designation. Thus cities like Biggs, Willows, Live Oak and Colusa are faced with some challenges and decisions. For the City's of Live Oak, Colusa and Willows, whom have spent a combine \$50 Million in treatment plant upgrades in the last 5 years, they are now faced with additional treatment plant upgrades in the range of \$4-5 Million each to produce a quality of effluent that meets this MUN designation, plus burdened with the additional operations and maintenance costs. This all translates to future rate increase to their customers. The Regional Board adopted the City of Live Oak and Willows permit June 10th, and denied a request for relief from the MUN designation. The board members seem to support a Basin Plan amendment, however in a 3-2 vote adopted the staff recommendations. Since they are appointees to the board by the governor, future opinions and findings are unreliable. Now the three cities mentioned above have the decision about seeking their own basin plan amendments at an estimated cost, according to the City of Live Oak staff, of \$500,000 each, with no guarantee they will be successful, or upgrading their treatment plants. The unfortunate result with all of this is that these cities have just spent a combine \$50 Million dollars to upgrade their treatment facilities, and the day their permit was renewed, they are in violation and will be facing continuing fines.

Where does that leave the City of Biggs?

Biggs, is in the enviable position that we have more options and have not yet invested in our upgrade. In some way's we are fortunate for the delay's caused by USDA and the ARRA funding, because they have left us more options to consider. Our options are as follows: 1.) to pursue de-designation just as Live Oak and Willows attempted, 2.) pursue a basin plan amendment on our own, 3.) upgrade the plant to meet this new designation at a cost of approximately \$10-12 Million, or 4.) convert our treatment plant to a land discharge, thus eliminating the need for and NPDES permit under the basin plan. We have more options at our disposal because we have not made the large capital investment the other plants have completed.

In February of this year we were contacted by our Regional Board Representative about the MUN designation matter as it pertained to Biggs, and thus began an active dialogue with all stakeholders and observed the process and rulings. During one of our many conference calls it was suggested for a third time by the Regional Board that the City of Biggs consider modifying its operations and convert to land discharge. The original suggestions were made back in 2000 and again in 2006. In 2000 when this suggestion was made, we pursued a summary study which was essentially a water balance to assess how much land we may need to procure for a zero discharge permit. The results of this study showed approximately 160 acres of land would be needed to allow the city to complete a land discharge facility, that would allow for around 20 years of growth at 3% growth rate per year. This was further explored in 2006 when the city actually contacted a purchasing agent to explore procuring the lands, but was unsuccessful. Keeping in mind that the regulations at that time had us looking at a plant upgrade and capital cost that was equal or below the cost of converting to a land discharge option.

Now in 2011, the substantial increases unanticipated in the regulatory permitting process coupled with diminished land values may give additional merit to again re-considering converting the Biggs treatment plant to a land discharge permit, thus eliminating the requirement for application and compliance with the NPDES discharge permit, which is much more regulated by EPA, and the Basin Plan. This was suggested by the Regional Board staff again in April of this year.

What advantages does land discharge provide to the City of Biggs?

Essentially should the City elect to pursue and successfully complete a land discharge treatment facility modification it would provide the following advantages:

- 1.) Eliminates the need for an NPDES permit, thus limits the discharge effluent water quality standards to about where we are currently.
- 2.) Keeps the overall operations and maintenance at about the same levels they currently are. There will be some swapping of tasks, and testing but the need for things like weekly testing, chlorination, and de-chlorination would be unnecessary.
- 3.) May be at a capital cost that is near our current funding request for USDA or \$5-6 Million verses \$10-12 million, largely depending on the capital costs of land acquisition.
- 4.) May produce some revenue off sets to farming that could help to fund operations and maintenance.

What are disadvantages to land discharge for the City of Biggs?

- 1.) Should the City experience accelerated growth, it could require the procurement of additional lands in order to grow beyond the 20 projected population.

Background Specific to this Request:

On or about May 22nd, the City received a notice of Violation from the Regional Water Quality Control Board. Along with this notice of Violation the Regional Board also sent a request for justification for compliance notice to the City of Biggs. This has become “normal operating procedure” for the Board, in that no City is capable of keeping up with ongoing regulations. Thus, with an application and approved compliance schedule, the Board credits back to the City

the administrative penalties towards the cost of the treatment plant upgrade improvements. This was the case for the City back in 1999 under our last upgrade.

We have a waste water facilities plan. We have complied with the 5 special studies related to our current permit. We have an application pending before USDA that could fund an upgrade to our treatment plant. We also have the new interpretation of the basin plan regulations that would require us to either phase our increase our upgrade by about double.

In addition to the above knowledge base we also have been provided a recent and approved model of expected discharge requirements and approval process by the Regional Board Staff for the Maxwell Public Utilities District. We have closely examined this permit and base our assessments and recommendations herein on this recent permit.

We have another option we could pursue which is to utilize the existing water balance data, update it and provide an amendment to the waste water facilities plan alternatives that examines converting the treatment plant to a zero discharge facility. Prior to submitting a compliance schedule, we believe it may be a viable option to consider this, which would substantially modify our compliance schedule application. Each of the 4 options discussed above (repeated below), has different compliance schedules and implications. We have a good assessment about what each of these may take, but need to discuss with the city council the preferred direction in order to put forth a compliance schedule.

Options listed from above:

- 1.) to pursue de-designation just as Live Oak and Willows attempted,
- 2.) pursue a basin plan amendment on our own,
- 3.) upgrade the plant to meet this new designation at a cost of approximately \$10-12 Million, or
- 4.) convert our treatment plant to a land discharge, thus eliminating the need for and NPDES permit under the basin plan



EXHIBIT 2

PROJECT NAME: BIGGS WWT/FACILITIES PLAN UPDATE, DISCHARGE REPORT, GW MONITORING PLAN

CONTACT: PETE CAHR

Sl. No.	Activity	Days	Principal Engineer	Assistant Engineer	Community Development Officer	Health Officer	Sanitation Officer	Water Officer	Planning Officer	Other Development Officer	Total
1	Review and update zara discharge report considering best available technology, and best practices i.e. sprinkler, depth of ponds, crops type	10	10	40							\$3,147.90
2	SWWTP Facilities Plot Update										\$3.00
3	Schematic Plan of Improvements	10	20	40							\$6,492.70
4	Draft Design of treatment pond holding and relation areas	5	30								\$3,984.75
5	Draft Regional Board Discharge Requirements	13									\$1,589.65
6	Cost Estimates	2	2	20							\$1,546.90
7	GW Monitoring Well Plan										\$0.89
8	Monitoring Well Construction Details	2	15								\$1,963.13
9	Monitoring Well Location Approval	8									\$1,033.08
10	Evaluation of existing GW data from local and state sources	2	25	10							\$3,877.72
11	Monitoring Well Observation Requirements and Schedule	5	30								\$1,363.15
12	GW Monitoring Well Plan	5	15	10							\$1,374.10
13	GW Monitoring Well Plan	5	15	10							\$1,374.10
14	GW Monitoring Well Plan	5	15	10							\$1,374.10
15	GW Monitoring Well Plan	5	15	10							\$1,374.10
16	GW Monitoring Well Plan	5	15	10							\$1,374.10
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100	GW Monitoring Well Plan	5	15	10							\$1,374.10



EXHIBIT 1

PROJECT NAME: BIGGS WWTP COMPLIANCE SCHEDULE

CONTACT: PETE CARR

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